



#### WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

# **Warmwater Fish**

# Region Two Warmwater Fishing Opportunities

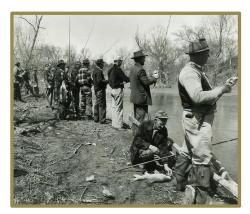
UPDATED: March, 2011

## Washington's Warmwater Gamefish Enhancement Program

The Washington Department of Fish and Wildlife's Warmwater Gamefish Program began in 1997 at the request of fishing organizations interested in bass, walleye, crappie, bluegill, perch, and catfish in Washington. The enabling legislation authorized WDFW to fund the program through a \$5 fishing license surcharge. Today the enhancement funds come from a share of total freshwater fishing license dollars at a reduced rate.

The Warmwater Gamefish Enhancement Program's goal is to increase opportunities to fish for and catch warmwater game fish. To do so, the program is conducting fish community assessment surveys in select lakes and identifying management strategies to improve the quality of fishing. Cooperative groups and volunteers are used whenever possible, to involve and educate the public, minimize costs and gain the greatest return for the investment.

This document provides anglers with a summary of regional lakes where warmwater fish are managed, and links to more detailed reports. It is important to remember that lakes are biological systems and fish communities change over time. We will provide the best information we have at the time of publication. Our reports can be found at http://wdfw.wa.gov/publications/ Click on: Fish/Shellfish Research.







## Region Two Warmwater Team

Marc Petersen and Mike Schmuck are the Region Two warmwater fish biologists. Their duties include:

- Fisheries assessments of regional warmwater lakes.
- Fall Walleye Index Netting (FWIN) surveys on major walleye lakes within Region Two (Banks Lake, Moses Lake, Potholes Res.). These FWIN surveys allow us to monitor walleye populations over time and make timely management decisions. Our FWIN reports can be found on WDFW's website.
- Capture brood-stock for hatchery production or transplant in other warmwater lakes, and relocate
  warmwater fish from lakes where these fish are un-wanted into lakes where these fish are
  needed.
- Develop and conduct creel surveys designed to determine angler effort and harvest on local warmwater lakes.
- Meet with angler groups (walleye and bass clubs) to discuss our work and answer questions.
- Write and publish reports that summarize data collected during surveys.
- Research aspects of warmwater fisheries either considered unique to Washington or otherwise unknown to biologists as a whole.

Since 1997, our team has surveyed most of the warmwater lakes in Region Two. Our reports can be found on WDFW's website and downloaded in a printable format.

Adobe Acrobat is required for viewing these reports.



Above (L to R): Weighing a Potholes Reservoir walleye, retrieving a walleye gill net on Billy Clapp Reservoir, adjusting our plankton net for sampling larval black crappie on Evergreen Reservoir.

# Region Two Warmwater Team Activities for 2010-11

 In April 2010 we collected 16 female and 28 male walleye for the Meseberg Warmwater Hatchery. These broodstock produced walleye fry for stocking into Liberty Lake near Spokane, WA.

In April 2010 we travelled to the Pend Oreille River near Cusick, WA in order to help the Kalispell Tribal biologists with a population estimate of northern pike. We spent about 12 hours on the water over two days and collected 34 northern pike. The pike population on the Pend Oreille River is growing rapidly and is a great trophy fishery.

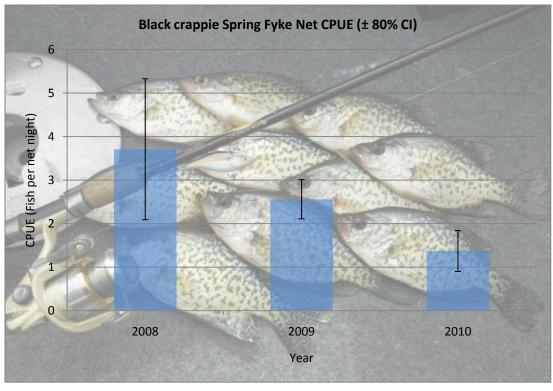


2010 marked the third year of spring black crappie fyke net sampling on <u>Evergreen Reservoir</u>.
 It appears as though crappie numbers are declining and very few crappie anglers were seen in

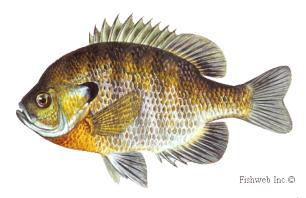
2010. In addition to fyke net sampling for adults we also sample larval black crappie using plankton nets. These nets have very fine mesh and effectively collect fish as small as 5 mm. We are attempting to determine the relationship between larval crappie abundance and abundance of two year old crappie collected in fyke nets two years later. This information



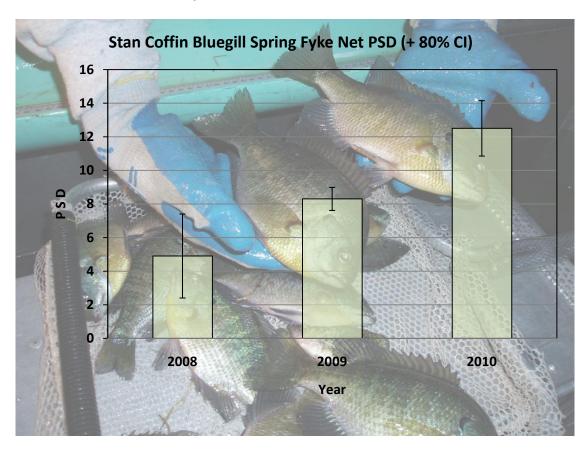
will help us determine where to stock hatchery produced black crappie as well as predict future crappie fisheries.



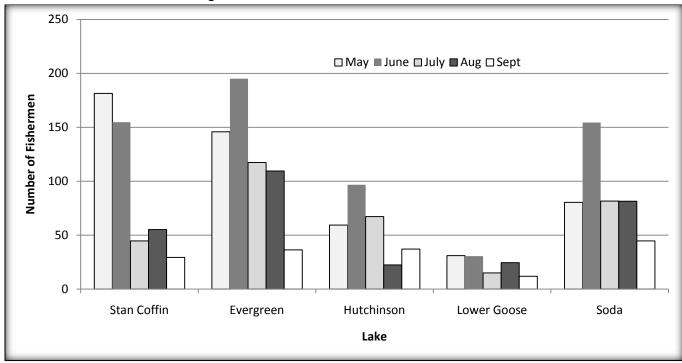
In May and June we sampled bluegill in Stan Coffin Lake using fyke nets in order to determine the density of bluegill over six inches in the population (Also known as <a href="Proportional Size Distribution">Proportional Size Distribution</a>, PSD). From 2003-2005 we stocked approximately 1,200 largemouth bass in Stan Coffin in order to reduce abundance of bluegill and increase the average size of bluegill. In 2006-07 we examined largemouth bass diets to determine the importance of bluegill in bass diets. Since 2007 we have been sampling bluegill in Stan Coffin Lake and have seen



a slow, but steady increase in the proportion of large bluegill. We hope to see the percentage of bluegill over 6 inches climb to 20-30 percent.



• From May through September 2010 we collected information on angler use of five local warmwater fisheries (Stan Coffin Lake, Evergreen Reservoir, Soda Lake, Hutchinson Lake, and Lower Goose Lake). We found angler use highest on Evergreen Reservoir and lowest on Lower Goose Lake. Determining where anglers prefer to fish helps us estimate the value of various fisheries, measure the success of our management actions and allows us to determine where to focus future management efforts.



From May to September 2010 conducted a creel survey of Leader Lake in Okanogan County. A total of 23,288 angler hours were estimated during 2010. The highest effort was recorded during the month of May when 7,320 angler hours were observed. The average length of a fishing trip was 3 hours. Angler target preference by species for 2010 was rainbow trout (48%), any species (24%), bluegill (22%), largemouth bass (4.5%), and black crappie (1.6%). Total angler harvest (fish kept) was an estimated 21,356 fish and

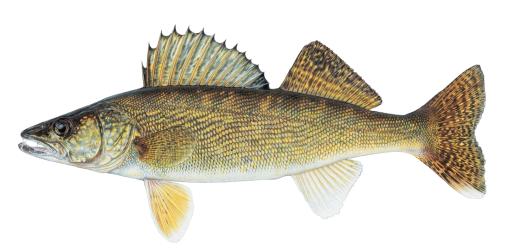


included: 13,720 bluegill, 4,556 rainbow trout, 1,075 black crappie, 1,968 largemouth bass, 17 smallmouth bass and 20 brown bullhead. The Leader Lake bluegill fishery is one of the finest in the state.

In October we conducted FWIN (Fall Walleye Index Netting) on Banks Lake, Billy Clapp Lake, Moses Lake, and Potholes Reservoir in order to monitor those walleye populations.

Abundance of walleye in Banks Lake has remained relatively unchanged since 2002

with only slight variations in walleve catch per net. Moses Lake walleye abundance is up slightly from 2009 but overall walleye catch per net is lower than any recorded from 2002-2007. abundance Walleye Potholes Reservoir has been declining steadily since 2008: however; it is higher than that seen in any year from 2004-2007 and anglers report that fishing has been very good. We don't feel that the decline in the walleye population is due to the change in length and harvest regulations implemented in 2006 (12" minimum size,





The crew prepares to collect information on walleye collected at Potholes Reservoir, Oct. 2010.

8 fish per day). A creel survey conducted on Moses Lake and Potholes in 2006 and 2007 found the average harvest (fish kept) of walleye per angler was less than one per trip. This level of harvest of far too low to impact the walleye population, and is also why we recommend anglers keep more walleye from Moses Lake and Potholes Reservoir.

 During winter we analyzed samples of larval fish collected on Evergreen Reservoir and entered 12 years of data into our statewide warmwater database.

# Prospects for Region Two Warmwater Lakes

The following is a synopsis of fishing opportunities for Regional waters where we manage warmwater game fish.

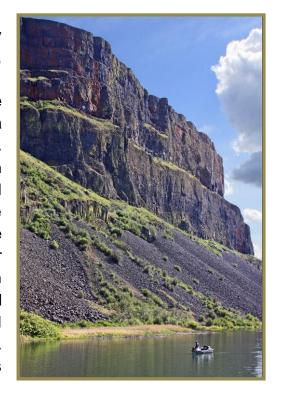
## Antilon Lake (Chelan County)

Antilon Lake is actually two lakes (total area 96 acres) located north of Roses Lake near Manson, WA. Antilon Lake is managed as a brown trout and crappie fishery and anglers report excellent fishing for both. There is an unimproved launch at both sites with good access for small to mid-size boats. We will visit Antilon Lake in May 2011 to determine the abundance and size distribution of the crappie population.



## Banks Lake (Grant County)

Banks Lake is located between Coulee City and Electric City along Highway 17. Banks Lake is an irrigation impoundment, has a surface area of 26,887 acres, and a mean depth of 46 ft. Banks Lake was once known as the state's premier walleye fishery; however, recently smallmouth bass have become a much more abundant and popular gamefish in this lake. Anglers will also find excellent **perch** fishing along the jetties on the south end, near the north end west of Steamboat Rock, and seasonally in the shallow bays of the northeast side of the reservoir. Other gamefish found in Banks Lake include **crappie**, **bluegill**, **bullheads** and **channel catfish**. Deepwater fish species found in Banks Lake include burbot (also known as freshwater ling) and lake whitefish. Rainbow trout and kokanee are stocked annually. Banks Lake is also surveyed each fall using gill nets to determine walleye abundance. Fisheries Reports on Banks Lake can be found on WDFW's website.

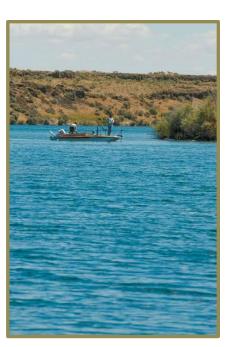


## Dry Lake (Chelan County)

Dry Lake (94 acres) is located approximately one and one half miles northeast of Lake Chelan and the city of Manson in Chelan County, Washington. Access to Dry Lake is limited to a small area where a boat can be launched. WDFW has no improved access on Dry Lake. In 2007 we surveyed Dry Lake and found largemouth bass and bluegill primarily. The bluegill population is comprised of mostly large fish with 70 percent over six inches. The largemouth bass population is structured ideally for producing large bluegill. Approximately 16 percent of bass are over 12 inches and 10 percent are over 16 inches. The majority of largemouth bass are under 12 inches and well suited for preying on juvenile bluegill. We also collected black crappie, yellow perch, and brown bullhead, although in low numbers.

## **Evergreen Reservoir (Grant County)**

Evergreen Reservoir lies within the Quincy Wildlife Area in Grant County, Washington, approximately 8 miles southwest of Quincy, Washington. Evergreen Reservoir has a surface area of 247 acres and a mean depth of 19 ft. Walleye, largemouth, and smallmouth bass are popular species sought by anglers at Evergreen Reservoir; however; black crappie and bluegill are also targeted by a growing number of fishermen. Evergreen Reservoir is our only tiger muskie lake in central Washington and fish we stock approximately 150 fish per year (12-13 inches). Tiger muskies are voracious feeders and are often caught near the edge of weed beds where they hunt for small fish. In 2005 we conducted a fisheries survey of Evergreen Reservoir. This report can be found on WDFW's website.



### <u>Hutchinson—Shiner Lakes (Adams County)</u>

Hutchinson and Shiner lakes are located approximately four miles west of Othello, WA. These lakes are part of the Seep Lakes chain that originates south of Potholes Reservoir. Hutchinson and Shiner

lakes, combined, have a surface area of 83 acres, and a mean depth of 11.5 ft. Water drains from Shiner Lake into Hutchinson Lake via a small channel approximately 150 ft. long. These lakes are managed for largemouth bass and bluegill. Anglers can also find black crappie and yellow perch. We encourage anglers to keep as many yellow perch as possible since we would like to keep their numbers down. Largemouth bass was the most abundant species collected followed by bluegill, and anglers should find excellent fishing in 2011. We surveyed these lakes in fall 2004 and this report can be found an WDEW's week.



fall 2004 and this report can be found on WDFW's website.

## Lower Goose Lake (Grant County)

Lower Goose Lake lies among the seep lakes in Grant County approximately 9 miles northwest Othello, Washington, and approximately 3.5 miles south of Potholes Reservoir. Lower Goose Lake has a surface area of 50 acres and a mean depth of 25 ft. Lower Goose Lake was surveyed in 2007 and large numbers of fish were collected. Gamefish collected (in order of abundance) included: largemouth bass, yellow perch bluegill, and walleye.



#### Moses Lake (Grant County)

Moses Lake is a perhaps the best **walleye** fishery in the state of Washington and likely holds the new state record. Regulations on Moses Lake allow anglers to retain eight **walleye** with a minimum size of 12 inches with one fish allowed over 22 inches. Results from our <u>FWIN surveys</u> suggest a very dense population of **walleye** exist in Moses Lake and anglers should put this fishery at the top of their list. While **walleye** and **smallmouth bass** are popular sport fish in Moses Lake, **Largemouth bass**, **yellow perch**, **black crappie** and **rainbow trout** are also popular gamefish found in Moses Lake; however **black crappie** are not as abundant as they once were. Walleye and bass tournaments are held on Moses Lake annually and the results of these contests can be found on WDFW's website.

## Palmer Lake (Okanogan County)

Palmer Lake is located approximately 5 miles north of Loomis, WA. The lake has a surface area of 2,110 acres, and a mean depth of 51 feet. We last completed a full warmwater survey in Palmer Lake during the fall of 2009. Smallmouth bass was the most abundant species collected and fish up to 18 inches were collected. We also collected largemouth bass (one fish measured 22 inches!), black crappie, bluegill and yellow perch. This lake



offers an excellent angling experience due to both the fish in the lake and the beautiful scenery surrounding the lake. In addition to excellent smallmouth bass fishing Palmer Lake hosts an excellent kokanee fishery. Our 2005 fisheries report can be found on WDFW's website.

#### Potholes Reservoir (O' Sullivan Reservoir) (Grant County)

Potholes Reservoir is one of the most popular fishing destinations in Region Two. It is a 28,200-acre reservoir in Grant County, formed by the construction of O'Sullivan Dam across the Crab Creek Valley in 1949. We conducted a standard warmwater survey on Potholes Reservoir in 2000. Numerous warmwater gamefish are found in Potholes; however yellow perch, walleye, smallmouth and largemouth bass are the most abundant species. Potholes Reservoir is another of our regional FWIN waters. Our data have shown a slight decline in walleye; however,



they remain abundant and this reservoir remains a dynamite **walleye** fishery. Other gamefish found in Potholes include **bluegill**, **black crappie**, **channel catfish**, **rainbow trout** and **bullhead**. Walleye and bass tournaments are held on Potholes Reservoir annually and the results of these contests can be found on WDFW's website.

## Red Rock Lake (Grant County)

Red Rock Lake is approximately 3 miles southeast of Royal City, Washington. Water levels in Red Rock Lake fluctuate a great deal during the spring and summer which makes boat access difficult. Our last survey of Red Rock Lake occurred in spring 2005. Yellow perch was the most abundant species collected followed by largemouth bass. Other gamefish found in Red Rock Lake include black crappie, bluegill, and brown bullhead. Tiger muskies were once present in Red Rock Lake; however; no tiger muskies were collected during this survey, and we haven't



stocked **tiger muskie** in Red Rock Lake since 2001. There are a few very large **bass** in Red Rock Lake. One fish collected was eight pounds! Our report can be found on WDFW's <u>website</u>.

### Roses Lake (Chelan County)

Roses Lake is located approximately one mile northeast of Lake Chelan and 1 mile north of Manson, Washington. The lake is 131 acres, and a maximum depth of approximately 30 feet. Roses Lake is managed as a winter trout fishery as well as a warmwater fishery. We surveyed Roses Lake in the fall of 2004 and since then we have revisited the lake several times to monitor the bass and bluegill populations. During our 2004 survey largemouth bass was the most abundant species collected followed



by **yellow perch** and **bluegill**. There are also **channel catfish** in Roses Lake – some of which are very large. The band of bulrush and cattail surrounding Roses Lake holds many large **bass**. Anglers should focus on these areas as they provide excellent cover for both bass and the small prey fish that bass prey upon. Our report can be found on WDFW's <u>website</u>.

#### Sprague Lake (Adams/Lincoln Counties)

Sprague Lake is located in eastern Washington approximately 3 miles southwest of Sprague, Washington. The lake has a surface area of 1,800 acres, a mean depth of 11.5 ft., and is approximately 6 miles in length. Sprague Lake was rehabilitated in 2007. Since the rehab, DFW stocked rainbow trout for a transitional fishery until warmwater species become established. In recent years Sprague Lake has been producing rainbow trout from 2.5 – 5 pounds consistently. In summer 2008 DFW stocked bluegill, largemouth bass and black crappie in order to create a new warmwater fish community. We are interested in angler effort and harvest. Please let us know about your success and creel. If you catch a fish we haven't stocked (e.g. walleye, yellow perch, bullhead, tench) please let us know.





## Stan Coffin Lake (Grant County)

Stan Coffin Lake is located in the Quincy Wildlife Area. This lake has a surface area of approximately 40.9 acres and is approximately 20 feet at its deepest point. Stan Coffin Lake is the only catchand-release largemouth bass fishery in the state. Since 2003, we have stocked nearly 1,200 adult largemouth bass in SC Lake in order to reduce yellow perch and pumpkinseed abundance. Anglers will notice many largemouth bass in Stan Coffin Lake are tagged near their dorsal fin with red plastic tags: PLEASE leave the tags in the fish. These tags are used to monitor growth of individual



fish in the lake. Other gamefish found in Stan Coffin Lake include **channel catfish**, **yellow perch** and **pumpkinseed**. Anglers are encouraged to keep all **yellow perch** and **pumpkinseed** since these species are undesirable in this lake. In 2006 we also placed several catfish spawning barrels in Stan Coffin Lake. Currently we don't feel that catfish have suitable spawning habitat; these barrels should fill that need. PLEASE DO NOT DISTURB the barrels. In 2005 we compiled a four year summary of warmwater surveys. This report can be found on WDFW's <u>website</u>.



Catfish spawning barrel in approximately 3 feet of water.

## Upper Goose Lake (Grant County)

Upper Goose Lake lies among the seep lakes in Grant County approximately 10 miles northwest of Othello, Washington, and approximately 3 miles south of Potholes Reservoir. Upper Goose Lake has a surface area of 130.5 acres, and a mean depth of 46 ft. We haven't surveyed Upper Goose Lake since 2000; however; during that survey we collected (in order of abundance) largemouth bass, pumpkinseed, walleye, yellow perch and bluegill. Anglers are encouraged to contact us and report their success.



## Wapato Lake (Chelan County)

Wapato Lake is approximately 3 miles from Manson Washington. Wapato Lake has a surface area of 216 acres and has a maximum depth of 68 feet. The lake has water control structures for irrigation and flood control. Public access is provided by the Washington Department of Fish and Wildlife (WDFW). We conducted a Fisheries Survey if Wapato Lake in 2006, but unfortunately this report is still under review in Olympia. Wapato Lake is managed as a mixed species fishery; WDFW stocks both fingerling and triploid rainbow



trout in Wapato Lake. In 2006 we collected (in order of abundance) largemouth bass, pumpkinseed sunfish, yellow perch and bluegill. Approximately 10 percent of the largemouth bass collected were over 16 inches. During this survey we also collected several large, invasive <u>northern crayfish</u>. These crayfish can harm fish populations and represent a resource that should be utilized. The season for crayfish is the 1<sup>st</sup> Monday in May to October 31. There are no restrictions on number, size, or sex of invasive crayfish. Please consult the WDFW fishing regulations.

#### Washburn Island Pond (Okanogan County)

Washburn Island Pond is located approximately 5 miles southeast of Brewster, Washington. The pond, which is primarily used by hunters and fishermen, has a surface area of approximately 140 acres, a maximum depth of 21 feet, and a volume of 1140 acre-ft. Washburn Island Pond is another of our largemouth bass—bluegill fisheries. We surveyed WIP in fall 2001. Bluegill was the most abundant species collected followed by largemouth bass, pumpkinseed, black crappie, brown bullhead and channel catfish. Bluegill are over-



populated in WIP so anglers are unlikely to find many large fish. In 2005, we removed a few hundred **bluegill** from WIP for transplant into a pond in the north Potholes Reserve. **Black crappie** collected during this removal were large and many were found near the outlet at the south end of the lake. Our 2001 report can be found on WDFW's <u>website</u>.

## Whitestone Lake (Okanogan County)

Whitestone Lake is located in the Okanogan River drainage approximately 5.7 miles northwest of Tonasket, Washington. The lake has a surface area of 173 acres, and a maximum depth of 25 feet. During 2008, we tagged about 500 largemouth bass. These uniquely numbered tags are blue, green, or orange and allow us to examine growth of bass in Whitestone Lake. PLEASE DO NOT REMOVE THE TAGS. In addition, we collected 6,000 small bluegill from Whitestone Lake for transplant into Sprague Lake. In 2006 we conducted a fisheries survey of Whitestone Lake, Bluegill were most abundant and large bass dominate that population. Very few small bass were collected during this survey. Our 2006 report can be found on WDFW's website.



#### **REGIONAL WARMWATER ACTIVITIES FOR THE 2011 FIELD SEASON**

- Warmwater Fisheries Survey of Patterson and Antilon Lakes
- Warmwater Fisheries Survey of Pend Oreille River
- Continue our angler use survey on Lower Goose Lake, Soda Lake, Evergreen Reservoir, Stan
   Coffin Lake, Hutchinson Lake
- Full creel survey of Palmer and Whitestone Lake (Okanogan County)
- Electrofishing to monitor tiger muskie growth and diet in Evergreen Reservoir.
- Largemouth bass growth studies (Desert Lake, Roses Lake, Whitestone Lake, Stan Coffin Lake).
- Evergreen Reservoir black crappie abundance surveys
- Stan Coffin bluegill monitoring (Proportional size distribution)
- Collect hatchery brood stock (walleye, black crappie)
- Walleye gill nets surveys (Banks Lake, Billy Clapp, Moses Lake, Potholes Reservoir)

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